A NEW ERA FOR AVIATION IN EUROPE

Aviation is vital to European mobility and its economy.

This summary explains why and outlines the challenges that need to be addressed over the next four decades to maintain European leadership in an increasingly competitive environment.

ACARE (Advisory Council for Aviation Research and Innovation in Europe) is a forum for Aviation stakeholders which, since 2000, has set the research agenda for delivering significant improvements in sustainable, reliable, affordable, safe, secure and passenger-friendly aviation.

Significant progress has been made since 2000; new aircraft designs are quieter and burn less fuel per passenger kilometer which means lower emissions.

ACARE has now set out challenging objectives for future decades in the European Commission’s document “Flightpath 2050” which was published in March 2011. This new vision was developed by a High-Level Group for aviation research and innovation under the leadership of the European Commission.

With new membership, ACARE is setting out the research requirements for the future - a Strategic Research and Innovation Agenda (SRIA) that will provide a pathway towards the vision. The SRIA will inform future policy direction such that new radical solutions can be demonstrated to make the step change needed to deliver the very ambitious goals set by Flightpath 2050.

Europe is world class in Aviation and the Flightpath 2050 vision and the SRIA will help to strengthen that position.

ACARE Members include:

- 27 Member States
- European Commission
- Manufacturing Industry
- Airlines
- Airports
- Air Navigation
- EASA
- EUROCONTROL
- Research Centres
- Universities
- Energy
- Regulators

Over 50 Members

www.acare4europe.org

Aviation in Europe:
a vision for 2050

RESEARCH AND INNOVATION TO DEVELOP WORLD LEADING TECHNOLOGY SOLUTIONS TO SERVE SOCIETY’S AIR TRANSPORT NEEDS TODAY AND IN THE FUTURE
SAFER, FASTER AND MORE SECURE TRAVEL

Aviation connects markets and people worldwide. By 2050, air transport will be more effectively linked to other types of transport where innovative services will allow passengers and freight to travel seamlessly from door to door. The travel experience will be considerably improved with non-intrusive security systems preserving privacy and personal dignity. The majority of passengers will pass through airport security processes without disruption or delay. Better designs, more stringent incident reporting and advances in operator performance will further improve aviation safety – already at unprecedented levels.

REDUCING THE IMPACT OF AIR TRANSPORT ON OUR ENVIRONMENT

A truly new generation of European air vehicles and equipment will consume less fuel, generating lower emissions, and make less noise. Aircraft missions will be optimised with the best routes for fuel and time efficiency with a consequent reduction in emissions. Sustainable alternative fuels including biofuels will also help to reduce emissions as well as dependence on crude oil. Electric vehicles will be used for ground operations at airports, further reducing the sector’s carbon footprint and more importantly improving the local air quality. Intermodal connectivity will be much improved, to further reduce the negative impact of surface transport in and around airports.

TOUGH NEW CHALLENGES AND AMBITIOUS GOALS

Worldwide air passenger traffic is forecast to grow by 4 to 5% per annum. This growth needs to be met whilst minimizing its negative impact on the environment. Air travel in 2050 will need to look very different than that of today. Competition to provide the products and services to meet that growth is also intensifying. This competition comes not just from traditional rivals, such as the US, but increasingly from strong challengers from Brazil, Canada, China, India and Russia.

To make the most of this opportunity, Europe must make substantial and sustained investment, not only in the technologies of today and tomorrow, but also in the development of innovative travel services and through the right regulatory framework that sustains a level playing field with the rest of the world. This investment will start with research and development set out in the Strategic Research and Innovation Agenda (SRIA).

ACHIEVING THE VISION

To achieve Europe’s vision for maintaining global leadership, ACARE has set tough goals to improve air travel by 2050. The list below shows some of the targets that have been set within Flightpath 2050.

- A reduction of 75% in CO₂, 90% in NOx and 65% in noise relative to 2000.
- 90% of travellers within Europe able to complete their journey, door to door, within 4 hours.
- Europe is established as a centre of excellence on sustainable alternative fuels.
- An air traffic management system to handle 25 million flights per year.
- The European air transport system has less than one accident per ten million commercial aircraft flights.
- Efficient boarding and security checks allow seamless security.
- Europe will maintain leading-edge design manufacturing and systems integration capabilities and jobs.

NEW ACARE GOALS FOR AVIATION FOR 2050

Europe is home to approximately 448 airlines and 701 commercial airports which in 2010 supported 606 million passengers allowing the free movement of people and goods across borders. Aviation creates economic growth, wealth and provides highly skilled jobs – it generates nearly 600 billion Euros annually and supports 8.7 million jobs. On average almost 7 billion Euros are invested ever year in civil aeronautics research and development – R&D helps develop Europe’s competitive advantage.

Aviation makes a significant contribution to society and the economy